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cc: LWOC00 --KR25 KESSLER DAVID

Date and time 10/03/96 13:22:54

From: DAVE KESSLER, 2/65, 74735, Mail Code 01822  
Subject: your draft for blur filters:

LENS BLUR- in problems I would write: Low resolution . (this is a bad choice for a blur filter. It kills the aliasing and the image alike)

Lens Stopped down- I will not put it on the list at all.

Quartz for low end- Benefits- IQ rocks.

There is no problem with the thickness for a camera in the low end designed with the filter in mind (you may want to either change the entry or put a \* and a remark on a separate page)

The price for the 2 and 3 layers quartz seem too high even with the surface quality requirements they have. Are they recent numbers from Mruk?

Calcite Quartz and lithium are all uniaxial crystals. They all can have the 2 or 3 layer configuration. They all have similar high IQ. Calcite problems are hard to get the required surface quality. Cleavable material. Also, the birefringence is so high the filter will be quite thin.

Lithium Niobate preferred solution is 2 piece. One will not do at all. 3 is complicated because of the cementing. The price is also too high. The material is \$36 for wafer (\$12 per filter) add to that grinding and polishing and coating- it should not get that high. Our guidelines were <\$200

YALO and KTP are biaxial crystal solution. Problems are mostly- f/number and field dependence , namely at some mid f/numbers and at the extreme fields the effectiveness of the anti aliasing is reduced.

Cone in a cone- I think this is the reference to my "cone doublet" The problems are that it is a "front of the lens" solution , not a rear ccd solution . Cost can be very small (can be plastic molded) IQ can be high. Work status- some made ( I have them )untested yet. Patent- not yet.

Let me know if you have questions. Dave.

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Commission Expires Sept. 30, 2006  
Reg. No. 016T4713863